Project Report
Alaska Public Broadcasting, Inc.
Project Number No. 174-05
July 1, 2011 – September 30, 2011

Project Title & Summary

Four project work scopes are embodied in this grant award. The majority of the award is dedicated to two broad infrastructure work scopes; Public Broadcasting Facilities & Equipment Modernization Project and Radio Digital Conversion.

Public Broadcasting Facilities & Equipment Modernization Project

The purpose of the Public Broadcasting Facilities & Equipment Modernization Project is to provide much needed capital revenue for addressing system-wide infrastructure and technology priorities. In 2004, a system-wide infrastructure and technology needs assessment, ranging from basic tools to new facilities, approximated $38 million. Total Denali Commission funding: $5,617,000.

Public Radio Conversion to Digital Transmission

Alaska's 26 public radio licensees are changing their primary transmission equipment to the new standard for digital broadcasting. Funding the appropriate needs for all of the stations cost approximately $4.1 million. The Corporation for Public Broadcasting (CPB) committed $2.5 million and the Rasmuson Foundation committed approximately $700,000 toward the total. This critical funding assured that the project had the resources to meet anticipated as well as unanticipated needs. Denali Commission funding: $895,000.

Digital Distribution Network

Public broadcasting data network interconnects all of Alaska's public radio and television stations by means of a digital intranet and the internet. This project was originally funded by the Denali Commission in FY04. The funding helped complete this project and provided for some maintenance. Denali Commission funding: $100,000.

Alaska Rural Communications Service (ARCS) & Satellite Interconnection Revitalization

Repair and replacement of existing broadcast infrastructure used to deliver public telecommunications services via radio and television to Alaskans all across the State. This project was originally funded by the Denali Commission in FY04. The funding helped complete this project. Total Denali Commission funding: $100,000.

Reporting Period: July 1, 2011 – September 30, 2011

Activity during the third quarter of 2011 occurred within the primary work scope: the facilities and equipment modernization project.

Facilities & Equipment Modernization Project – Capital Grant Program

Overall progress to date includes successful development and implementation of this capital grant program. APBI modeled the grant program after three well established programs which are familiar to public broadcasters in Alaska: the Rasmuson Foundation, the Corporation for Public Broadcasting, and the Public Telecommunications & Facilities Program, U.S. Dept. of Commerce. We focused on the Rasmuson Foundation approach while incorporating some good ideas from the other two entities. We sought a high degree of integrity and accountability throughout the development of the grant program. Milestones reached since project inception:

<u>2005</u>

- Development of grant program concept and materials: overview, guidelines, priorities, procedures and panel review process, including development of application paperwork and administrative systems.
- Announcement of the Round I grant period occurred July 27, 2005. Applications were distributed electronically as well as via U.S. mail to all eligible entities. Deadline for the applications was September 30, 2005.
- A five person, independent grant panel met in Anchorage, October 16-17, 2005, to review Round I proposals and make recommendations resulting in seventeen projects being awarded $815,529 toward a total project cost of $1,228,990. Collectively, the stations funded 34% of the total project cost.
- The panel process went smoothly and produced a legitimate independent review of the proposals per the grant program priorities and guidelines. It was evident that the panel had read all proposals and had come to the meeting ready to identify and discuss the strengths and weaknesses of the proposals. Throughout the review, the APBI staff provided additional station and system information to the panel as requested.
- On October 26, 2005 the APBI board of directors approved the overall package of recommendations made by the panel and management. Round I award announcements were made October 31, 2005.

<u>2006</u>

- Announcement of the Round II grant period occurred March 10, 2006. Applications were distributed electronically as well as via U.S. mail to all eligible entities. Deadline for the applications was June 1, 2006.
- Round II received seventeen proposals requesting $998,290 in financial assistance toward total project costs of $1,170,232. Collectively, the stations

funded approximately 15% of the total project cost. Five proposals were for facility improvements and twelve were for equipment.

- A five person, independent grant panel met in Anchorage, June 29-30, 2006, to review proposals and make recommendations. The panel recommended that eight proposals be funded with no conditions attached and six be funded with conditions attached. Three proposals were not funded although the panel recommended that the applicants be given an opportunity to resubmit their proposals in order to address panel concerns. All three proposals were resubmitted and awarded grants.

2007

- An update of the system wide assessment was completed in August, 2007. Although many needs have been met since the original assessment in 2004, the system reports approximately $36 million in unmet capital needs.
- Announcement of Round III of the grant program occurred August 17, 2007. Applications were distributed electronically to all eligible entities. Deadline for application was October 19, 2007. Sixteen proposals were received by the deadline requesting $916,371 toward a combined total project cost of $1,179,703. Collectively, the stations funded approximately 17% of the total project costs. The proposals were reviewed by a grant panel on November 15-16, 2007.
- Round III grant award announcements were made in early December, 2007. The panel recommended that five proposals be funded with no conditions attached and eight be funded with conditions attached. Three proposals were not funded although the panel recommended that the applicants be given an opportunity to resubmit their proposals in order to address panel concerns. One of the three proposals has been resubmitted and was awarded a grant following additional panel review.

2008

- Round IV was announced October 1, 2008. Deadline for application was December 10, 2008. Fourteen proposals were received by the deadline requesting $902,753 toward a combined total project cost of $1,016,831. Collectively, the stations funded approximately 11% of the proposed total project costs.

2009

- Round IV grant panel met January 22-23, 2009 in Anchorage. Round IV grant award announcements were made in early February, 2009. The panel recommended that six proposals be funded with no conditions attached and six be funded with conditions attached. Two proposals were not funded although the panel recommended that the applicants be given an opportunity to resubmit

their proposals in order to address panel concerns. The two proposals were resubmitted and awarded grants.

- Round V of the grant program was announced on August 14, 2009. Deadline for applications was October 23, 2009. The Round V grant panel met in Anchorage, November 13-14, 2009. The panel recommended funding for 14 station based capital projects; a total award of $808,782 toward a total combined project cost of $934,297. Collectively, the stations funded 13% of the total project costs. Project award announcements were made in mid December, 2009.

2010

- On March 31, 2010 the Denali Commission approved an extension to this project and the new deadline for project completion is December 31, 2011.
- Round VI of the grant program is likely to be the final grant round. Round VI was announced on July 16, 2010. Deadline for application was September 30, 2010. The Round VI independent grant panel met in Anchorage October 21-22, 2010.
- The panel recommended funding for 17 station based capital projects; a total award of $701,245 toward a total combined project cost of $799,230. Collectively, the stations funded 12% of the total project costs. Project award announcements were made in mid November, 2010.

2011

- APBI continues to monitor grantee compliance for all projects from all previous rounds through quarterly reporting requirements. All outstanding projects will need to be completed by December 2, 2011.
- Since project inception, the Capital Grant Program has conducted six grant rounds awarding funds for 94 station based projects. The total combined cost of the 94 projects is $5,246,852. The Capital Grant Program share to date is $4,250,711 or 79% while the station total match to date is $1,094,485 or 21%.
- Grantees are busy closing out the remaining open grants.

Dynamic Carrier Control Project activity during the third quarter of 2011:

There are seven stations operating 10 KW AM transmitters in Alaska. They serve rural areas and have seen the electrical utility costs increase dramatically the last few years. One of the transmitters is powered by on-site generators and diesel costs have skyrocketed. Costs are approaching $0.50/kilowatt hour. These transmitters consume 24 kilowatts at peak modulation. APBI conducted research to help reduce the amount of power used by these installations.

The Dynamic Carrier Control technology was developed in England and Europe in the 1980's. This method of modulation helps reduce electricity costs. It is used all over the world with the exception of North America. This is because utility costs were low until recently. Until recently, there has been an FCC regulation forbidding this technology

based on reasons which are now obsolete. APBI applied to the FCC for an Experimental Authorization to show that this technology could be applied without degradation of audio.

KDLG-AM, Dillingham

APBI recently examined the Nautel XR M transmitter operating in AMC (Amplitude Modulation Companding) mode at KDLG in Dillingham. The settings have stayed right on the original settings and needed no adjustment. Estimated power savings for this station will be approximately $10,500/annum.

KOTZ-AM, Kotzebue

APBI has had continuing difficulty with the installation of DCC equipment on the Harris DX-10 transmitter. Further troubleshooting showed a defect on the main DCC circuit card. It was returned to Harris and was repaired and calibrated. Pierre Lonewolf, the Chief Engineer of KOTZ-AM has reinstalled the repaired card. Everything in the transmitter is now working properly and the audio quality is excellent and he expects power savings to be on the order of 25-30 percent.

KYUK-AM, Bethel

The unit for the Nautel XL-12 was installed during July and is operating normally. They will shortly have a power bill that will show the costs for a full month of operation using AMC mode

KBBI-AM, Homer

Carrier control equipment was installed on a Harris DX-10 on October 14th. It is working normally and audio quality is good with no reduction in coverage.

KCHU-AM, Valdez

We could not get the unit calibrated in this Harris DX-10 transmitter installation. The problem was traced to an improperly programmed logic chip. It was returned to Harris for reprogramming and calibration. The unit was then reinstalled and is now operating properly.

KSKO-AM, McGrath

This unit had the same manufacturing defect as the one in Valdez. We happened to have a unit that was destined for KBBI-AM, Homer in the office and we used that unit for installation on the Harris DX-10 transmitter. The transmitter is now operating

properly in AMC mode. This station generates its own power. It will be interesting to see how much of a reduction in fuel will occur.

KBRW-AM, Barrow

A carrier control unit and associated circuit boards were installed in the Nautel XL-12 transmitter. Midway through the adjustments the carrier control unit or one of the circuit cards failed. Nautel has sent us replacements which are in our office. We plan to travel to Barrow the week of November 6th and complete the installation. When Barrow is completed, all seven 10 KW AM public broadcasting stations in Alaska will be fully converted.

APBI presented a paper on this project at the 2011 National Association of Broadcasters convention. There is much interest in adopting this technology in the lower 48. The FCC recently approved the use of carrier control technology for stations in the lower 48. Both Nautel and Harris report that they have been deluged with requests for information about the technology and with orders for the equipment. APBI is a pioneer in the development of this energy saving technology in the United States.